

PRICE SIXPENCE.

*With the
Writer's Conf.*

ON

WAGE STATISTICS

AND

WAGE THEORIES.

By

JAMES MAVOR.

A PAPER READ BEFORE THE ECONOMIC SECTION OF THE BRITISH
ASSOCIATION AT BATH, SEPTEMBER, 1888.

EDINBURGH:

WILLIAM BROWN, 26 PRINCES STREET.

1888.

PR

PRICE SIXPENCE.

ON
WAGE STATISTICS
AND
WAGE THEORIES.

By
JAMES MAVOR.

A PAPER READ BEFORE THE ECONOMIC SECTION OF THE BRITISH
ASSOCIATION AT BATH, SEPTEMBER, 1888.

EDINBURGH:
WILLIAM BROWN, 26 PRINCES STREET.

1888.

How
at c
the
subj
into
to p
whe
whe
shan
app

of b
alter
have
imp
stra
ques

than
spec
SHA
THI
IN

it o
the

“ h
“ th
1888

ON
WAGE STATISTICS
AND
WAGE THEORIES.

How the product is distributed among the contributories to production is at once the most practically important and the most difficult question in the whole field of economic science. An exhaustive treatment of the subject of the distribution of the product would involve an examination into the causes that determine the relative shares of the contributories to production. It would also involve an examination into the question whether the distribution so effected was efficient distribution, that is, whether the contributories to production did in general receive as their share of the product the exchange value of the addition which, on the best approximate calculation, they had actually made to the product.

Round this question of distribution of the product the fiercest battles of barbarian and civilisee have been fought. The social changes effected by alterations in the ratios of distribution have brought about revolutions and have prevented them. It seems necessary to insist upon the supreme importance of thorough-going research into this problem since it is strangely avoided even by many of those who profess to discuss the wages question.*

My present intention is rather to put the problem in definite terms than to attempt an answer. The Section of the problem which I wish specially to define is this, WHAT ARE THE CAUSES THAT DETERMINE THE SHARE OF LABOUR IN THE PRODUCT, AND DO THESE CAUSES TEND TO MAKE THIS SHARE APPROXIMATE TO AN EQUIVALENT TO THE SHARE OF LABOUR IN PRODUCTION?

Towards making clear the full extent of the problem and the place in it of the section which it is proposed to define, the following analysis of the economic processes of production and distribution is offered.

* Its importance is even denied, as *e.g.*,—"It is of no practical interest to any human being whether the income of property bears a large or small proportion to that of labour." *Elementary Political Economy*, by Ed. Cannan, M.A. Oxford, 1888.

PRODUCTION, in general, as carried on in a highly organized society like ours, results from the exercise of four functions, these are--

1. The function of the Landholder.
2. The function of the Capitalist.
3. The function of the Employer.
4. The function of the Labourer.

Were one to affect exhaustiveness, one might place at the top of the list the function of the State.

PRODUCTION, in particular, is organized by the Employer, who either unites in his own person the functions of the landholder and capitalist, or contracts with others to exercise them. He also contracts with others to exercise the function of labour. In organized co-operative industry under the factory or other similar system all these functions are necessary. They may or may not be exercised by separate social classes, but they must be exercised either individually or collectively. LAND must be held and its product paid to an individual landholder, to groups of landholders, or to the State. Similarly CAPITAL must be held by individuals, by groups, or by the State; the direction and organization of labour, as well as the exercise of labour, must be performed either by isolated individuals or co-operatively. All the functions may be exercised by a single individual or otherwise, but the phenomenon of PRODUCTION involves the exercise of all four functions as an indispensable condition.

The characteristic of modern industry is the organization by an individual employer of a productive group, and among this group he is compelled to divide the product of co-operative labour.

The following is the analysis of the division:—

- a. TAXATION.
- b. INSURANCE.
- c. COST OF MATERIAL.
- d. RENT.
- e. INTEREST.
- f. WAGES OF ORGANIZATION AND DIRECTION.
- g. WAGES OF LABOUR.

It is clear that the amount of

(a) TAXATION is determined by causes beyond the direct control of the organizer of the productive group. These causes may, however, be separately investigated under the head of Theory of Taxation or of Public Finance.

(b) INSURANCE is also practically beyond the direct control of the organizing employer, amounting as it does to an actuarial estimate of risk both of business loss and of destruction by natural agents.

(c) THE COST OF MATERIAL is partly under the control of the organizing employer, depending as it does partly upon economical management and partly upon the operation of causes external to the productive group, and subject to investigation under the head, Theory of Prices.

(d) RENT.—By this is meant economic Rent alone, that is that portion of the product which is due to the natural powers of the soil and to the advantage of situation. It is subject to special research under the head, Theory of Rent.

(e) **INTEREST.**—This is that part of the product which is due alone to the employment of capital. It frequently includes a portion of what is conventionally called rent, as in a country where the unaided natural powers of the land have long been exhausted, and where the productivity of the land is largely due to the expenditure of capital upon it.

(f) **WAGES OF ORGANIZATION AND DIRECTION.**—This is that portion of the product which is due to the skill of the organizer of the productive group, and to those who direct the exercise of labour in it. From the axiom of the necessity of the functions, it is clear that in order to dispense with separate performance of any of the above functions, the remaining members of the group must exercise in addition to their own function, that with whose separate performance they desire to dispense.

(g) **WAGES OF LABOUR.**—The wages of labour are that portion of the product which is due to the share of labour in production. This share is strictly analogous to the others. Economic Rent is the result of certain forces of soil and air. Economic Wages are the result of the forces of the human body.

In the characteristic example of modern industry, the organising employer, after distributing the remunerations of the contributors to the production of his organised group, finds in normal circumstances a difference between the exchange value of the total product and the sum of the amounts which he has paid to the contributors. When this difference is a *plus* quantity it is **PROFIT**, and if it is a *minus* quantity it is **LOSS**. In the first case it is at the disposal of the producer, and in the second case it is initially borne by, the organiser of the productive enterprise—viz., the employer. Yet, clearly, this element of **PROFIT** can only arise where one or more of the contributors receives less than the economic share, as in case of **Loss** one or more of the contributors receives more than the economic share. It is of course assumed that the several elements may be theoretically distinguished from each other, though in practice it might be difficult to do so.

We have thus a series of economic quantities—Rent, Interest, Directive Wages, and Labour Wages, to which actual Rent, Interest, Salaries, and Wages more or less nearly approximate. The special section of the problem to be now attacked is this:—

- (1) DO ACTUAL WAGES, IN GENERAL, APPROXIMATE NEARLY TO THE ECONOMIC REWARD OF LABOUR, AS DEFINED IN THE ABOVE ANALYSIS?
- (2) WHAT ARE THE EFFECTS PRODUCED BY THE DIFFERENCE BETWEEN THE THEORETICAL ECONOMIC REWARD AND ACTUAL WAGES?
- (3) WHAT PROPOSALS HAVE BEEN ADVANCED TO SECURE NEAR APPROXIMATION, AND WHAT PROSPECT IS THERE OF ANY OF THEM EFFECTING THEIR PURPOSE?

1. Do actual wages approximate to the economic reward of labour, as defined in above analysis?

This question, with that of population, obviously forms the crux of the whole business; but it is hardly as yet to be answered from statistics. In the *first* place we must know what the return to labour is in the particular

productive process under investigation, or what the aggregate return is in any group of processes; and *secondly*, we must know what are the actual wages paid to labour. So far as an examination of a particular process at a single date is concerned, the ordinary monetary unit might suffice; but whenever we enlarge our inquiry, so as to include wages in different places or at different times, we are driven to adopt an arbitrary unit, otherwise we should be attempting to add dissimilar quantities. From this it is to be implied an adverse criticism upon all attempts to compare wages paid in different countries, or in the same country at different times, without using a flexible consumption standard. It would be necessary to reduce wages paid at different times and places to one common standard, involving not only prices but materials and quantities, to some such standard, in fact, as has been suggested by Professor Marshall.*

If it be a complicated process to describe movements in the actual wages of a workman, it is even more difficult to put down in set terms the corresponding expression for his economic wages. The exercise of each of the four functions in production being alike necessary, it is not easy to discriminate the specific shares of the agents, since, if the exercise of one function ceased that of all the others would cease also. Yet, if it be possible to express successive increments of labour and its produce in figures, it must surely in any particular case be possible to express the whole of it.†

The amount of each increment of labour, or correspondingly of each increment of capital, is in effect ascertained in every well-regulated business. No man is employed unless the product of his labour will more than meet the expense of employing him, and no additional capital is employed in the business without the expectation of immediate or ultimate increased return. While it would not be difficult in many productive processes to obtain an accurate statement of the share of the product thus actually due to the exercise of labour, there are, as matter of fact, no authoritative statistics containing the required data. It is almost futile to quote isolated cases in which the relative amounts paid to labour and to capital may be discriminated, because, even if they did detail the amounts with exemplary accuracy, it would be impossible to invest the statistics with any authority, since they would almost necessarily have to be given without disclosing names. Only a public department invested with considerable powers could possibly overtake the task of compiling reliable statistics on this point. There is, however, one characteristic feature of modern trade which is tending to bring about increased publicity in a perfectly voluntary way. This is the transformation of private industrial enterprises into public companies, and although, from the manner in which the accounts of of these companies are presented, they do not always disclose precisely the data required, they do sometimes enable one to form at least provisional judgments.

The prospectuses of enterprises seeking capital from the public are

* *Contemporary Review*, March, 1887. See also important passage in Mr. Edgeworth's Memorandum "On Variations in the Monetary Standard," British Association Reports, 1887, p. 268, *et seq.*

† Cf. Jevons' "Theory Pol. Econ.," pref. p. 1, *et seq.*; and Cairnes' "Leading Principles," p. 97.

not specially notorious for accuracy in their data, but some of them profess to represent the relative proportions of the payments to wages, giving at the same time the amount of the capital employed and the product.*

In the absence of statistics bearing definitely upon the point, we are driven to make provisional inductions from the data at our disposal.

It might appear that if the curve of wages in a particular trade followed very closely the curve of the wholesale price of the product, there would be a strong presumption, that such wages approximated to economic wages. This, however, by no means follows. All that such would prove would be that the fluctuations were related, not that the points from which they sprang approximated.

This is, however, at present almost the only practical test which can be applied on any considerable scale. It is open to all the objections which may be urged against the adoption of a sliding scale from a "starting point"† of average wages over a period of years, because the adoption of such a "starting point" assumes the whole question at issue. Yet it is of a certain positive value. If we find that two curves, one representing a whole and the other a part, hug each other for a great distance representing a long period, we are justified in assuming that certain forces are tending to assimilate their movements. And, therefore, in this case we have a certain positive assurance that labour is receiving a reward tending to approximate to the equivalent of its economic efficiency.

If, on the other hand, we find the curve of wages bearing no definite relation to the curve of the price of the product, we shall be justified in assuming that there is a strong presumption that labour is not receiving its economic reward. And if, furthermore, we find that in any trade the wages of labour bear no definite relation to the price of the product, but do bear a definite relation to the cost of the commodities which enter into the consumption of the class of labourers in question, we shall have a strong presumption that labour is receiving a reward not in proportion to its economic efficiency, but in proportion to the actual cost of its maintenance. In such a case labour may be economically productive to the employer but it is not economically productive to the labourer.

So far as it is possible to draw conclusions from the statistics published by the Board of Trade‡ and otherwise, it would appear that, in trades where powerful unions effect limitation of competition, and to a greater or less degree control wages, wages have either followed the curve of the price of the product in whose manufacture each trade is concerned, or they have been forced up during the years of good trade, and have been prevented from falling again. This is specially the case with engineers, carpenters, and mechanics. When one comes to such trades, however, as blacksmiths, bricklayers, ironfounders, and others, where the unions are not strong, or are used solely as benefit societies, it is found that the curve of wages approximates fairly to the curves of food prices and of general wholesale prices. In some cases the rise in wages preceded the rise in

* See Appendix I.

† Cf. Prof. Marshall's Introduction to Price's "Industrial Peace."

‡ Labour Statistics, Parliamentary Paper, c. 5104 and c. 5172.

prices, and in many the fall does not appear to have been as great as the fall in prices. Miners' wages in Scotland follow, with singular closeness, the price of pig-iron and the price of minerals in general, suffering, however, rather greater extremes of fluctuation than do these prices. Sliding scales have not till recently been used in Scotland; but the miners during late years have been consolidating their unions.

If it be the case, as suggested, that the curves of the wages of the less highly organised trades follow the curves of general wholesale prices, or specially of the wholesale prices of food, this result follows:—Since movements in retail prices are relatively smaller than those in wholesale prices, an advance of wages results in disproportionate gain to the wage earner, while a fall in wages results in disproportionate loss. Thus, assuming that retail prices were double wholesale prices, an advance in wholesale prices of 20 per cent. would mean an advance in retail prices of only 10 per cent., since the expenses of retail distribution would not be affected by the increased wholesale cost. If wages then, following the curve of wholesale prices, advanced 20 per cent. their purchasing power retail would become greater in consequence of the smaller relative advance of retail prices. Should, however, wholesale prices fall 20 per cent., and wages fall an equal amount, wages would lose in purchasing power, since the fall retail would only be 10 per cent. If this is sound, it would appear as though advance in prices would, other conditions remaining constant, be a benefit to the wage-earning classes.

It must be pointed out that any conclusions based upon any statistics of wages as yet in existence, in this country, must be merely provisional. The work of collection of wages statistics and their co-ordination, can, indeed, only be carried out by a public department, and at considerable cost. Yet thoroughly to understand the actual conditions is a necessary preliminary to effective social progress. It is a comfortable doctrine that all is making for the best; that in the long run rewards tend to reach those who earn them; but it is strangely falsified in real life. The world is not now at any rate built that way. The social forces we have to deal with may more safely be guided than left to work out their own salvation. Until we have before us the data to enable a satisfactory theory of production and distribution to be elaborated, it seems impossible to point the way salvation lies. The time is really over when economic theory can afford to eliminate the chief factors in the problem, and to rest in delusive certainty upon an abstract basis. The records of economic theory must indeed reflect the growing complexity of economic conditions. The simple relations of primitive communities are no longer susceptible of comparatively simple explanations, and though fundamental motives remain the same, they assume diversified forces, and enter into relations increasingly hard to disentangle.

From the cases quoted, it may fairly be concluded that in certain industries, for the most part those in which combinations among labourers have been most highly organized, wages appear in the main to approximate to the economic reward of labour as defined above. In those cases, on the other hand, where the principle of combination is absent or weak, wages tend to a minimum. And a third category might be formed of those few cases where the actual wages of labour are not left to the operation of hap-

hazard causes external to the productive group, but are fixed with the definite intention of approximating them to the economic wages of the labour in question.* Thus, where competition is limited wages tend to a maximum, where it is unlimited they tend to a minimum; what that minimum is varies in varying conditions.

- A. Minimum actual wage of able-bodied men in a country where there is a homestead law (as in America), is the amount which able-bodied men can earn on free lands.
- B. Minimum wage of able-bodied men in a country where the poor-law provides for the relief of able-bodied poor (as in Scotland), is the amount of that relief.
- C. Minimum wage of able-bodied men in a country where there is no relief of able-bodied poor is what will suffice to keep the working labourer alive. The amount of this depends upon various complex circumstances, but in practice it is found to fall far below the amount necessary to procure a scientific dietary, as *e.g.*, that of prisons.
- D. Minimum wage of female labour is the amount which the most prosperous of those among the male producers, who allow their female dependents to work, can permit them to work for.

Hitherto the problem has been regarded from the point of view of production. It is well, however, to consider the bearing of these considerations upon problems involved in the economic treatment of consumption.

Actual wages might be identical with economic wages, and yet the workers might be quite unable to maintain themselves at an efficient degree of healthy life. This might be the effect of several causes.

First.—A great increase in the use of machinery, or a great rise in the general rate of interest or of rent, might have so altered the distribution both of effort and of result, that the owner of the machinery found his share augmenting both relatively and absolutely, while the labourer found his share diminishing both relatively and absolutely.

Second.—Alterations in the exchange value of the product through currency changes or otherwise might reduce the economic share of the labourer to a point at which he could no longer live. If he changed his employment his wages would still be diminished for a time, owing to necessary want of skill in new work or otherwise.

Third.—A shortcoming or an overplus in the number of labourers in proportion to the remainder of the population would enable them, under certain conditions, to obtain more or less than economic wages.

Whether the actual wages be fully equal to economic wages or not, the economic worth of the man as producer cannot be realised unless they suffice to maintain him, and those dependent upon him, in full "physico-intellectual" activity.† Where they fall short of this there is a necessary reaction upon

* In this category would be placed the Familistère of M. Godin at Guise, and the Co-operative Woollen Works of Messrs. Thompson at Huddersfield.

† See Appendix II.

production, which is carried on with less efficiency than would otherwise be the case. As a general rule it may be taken that wants increase in complexity as man's activity becomes more varied; and, therefore, it would appear that saving for the possibility of a reaction in favour of "plain living and high thinking" the standard of comfort of all classes tends to rise. The amount necessary, therefore, for maintenance in full normal activity tends to advance, and, consequently, other things being equal, actual wages tend to advance also. But, granting all this, given perfect freedom of competition, there does not appear to be any tendency for actual wages to approximate more nearly to economic wages.

If the labourer is in receipt of actual wages equivalent to the economic wages earned by him, and if these are insufficient to maintain him at a normal standard of comfort, the only possible method by which he can legitimately raise his comfort to the standard or beyond it, is by increasing the total value of his product. It may be quite beyond his power directly to do this, because if he increases the quantity the exchange value may fall, and if he lowers the quantity, with the object of increasing the exchange value, he may meantime reduce his earnings to a greater extent than he might afterwards be able to recover from the increased exchange value. If, on the other hand, the labourer is not in receipt of an equivalent for his share in production, it does not follow that he would be able to increase his comfort even by increasing the total value of his product, unless it was clear that his increased exertion would result in increased actual wages. The position, therefore, that the only method of increasing wages is to increase the product is only partially true.

2. The effects of an absence of approximation between the return to labour and the reward of it are mainly these. There is no obvious direct relation between exertion and reward. It is impossible to deal effectively with industrial disorganization either by State action or by private associative effort. The purchasing power of the great mass of the people is diminished, since the surplus, instead of being conserved for the preservation of the continuity of production, competes with similar surpluses for immediately profitable and frequently ultimately ruinous employment.* From this practical point of view, it is well to note that the payment of high dividends indicates as a rule the dispensation instead of the conservation of the insurance fund. Acute investors are well aware that high dividends now mean low dividends at some future time, and though on a calculation of probabilities they may regard it as safe to have the dividend as long as it lasts, they know that low dividends will follow.

It is necessary to note shortly what relation this presentation of the problem bears to current wage theories. We have found that in some industries it is at least probable that wages tend to be depressed to the standard of comfort of the place and time, and in times of extreme depression are even temporarily thrust below it. This is precisely in accordance with the theory of Ricardo, which was, under the phrase "iron law of wages," adopted by Lassalle and Marx. In Ricardo's time, as is abundantly evident from the statistics of the period, the theory was true practi-

* As, for example, the extensive investments in the Securities of South American Republics, and tempting gold, silver, and diamond mines, in which a large portion of what might have constituted our national reserve has been frittered away.

cally for the whole of industry. Now it is only true of a part, for we have seen that the actual wages in the most highly organized trades, and in exceptional cases, do actually approximate to the economic reward of labour. This justifies so far the current theory that wages are a surplus over rent, interest, and profits—an expression that, as usually employed, is ambiguous, and which is only valid when used to designate what has been described above as *economic wages*.

The theory of wages must indeed be split in two. There is on one side the theory of wages, which has reference solely to that portion of the product which is due to the exercise of labour—this labour being divisible into two sections—directive and manual. In this sense the theory of wages is strictly analogous to the theory of rent and to a working theory of capital.

There is, however, a secondary theory of wages, whose function it is to offer generalizations upon the causes which determine actual wages and which produce the difference between them and economic wages.*

It might at first sight be thought that this is a return to an old theory, and that the well-known passage in the preface to the second edition in Jevons' "Theory of Political Economy" had been overlooked. This, however, is not so. "We must regard," says Jevons, "labour, land, knowledge, and capital as conjoint conditions of the whole produce, not as causes each of a certain portion of the whole produce. Thus, in an elementary state of society, when each labourer owns all the three or four requisites of production, there would really be no such thing as wages, rent, or interest at all. Distribution does not arise even in idea, and the produce is simply the aggregate effect of the aggregate conditions. It is only when separate owners of the elements of production join their properties and traffic with each other that distribution begins, and then it is entirely subject to the principles of value and the law of supply and demand. Each labourer must be regarded like each landowner and each capitalist, as bringing into the common stock one part of the component elements, bargaining for the best share of the produce which the conditions of the market allow him to claim successfully."† This is not antagonistic to the foregoing argument.

From what has been said above it follows that each labourer brings an effective addition of force to the productive group, and this addition of force has its result in an increased product. The amount of wages for this is regulated by the law of supply and demand and by the principles of value. But economic wages are regulated by the exchange value of the product, while actual wages are regulated by the exchange value of the labour force.

The sole difference between this position and that of Jevons is this. Jevons' Theory assumes that "ultimately" actual wages tend to be identical with the amount of the produce. This theory assumes that the tendency to approximation only operates when free competition is replaced by control either on the part of the labourers as in trade unions, or on the part of the employers as in the case of Leclair, Godin, or Thomson. The normal tendency when competition is free, is for actual wages to approximate to actual maintenance.‡

* Take, e.g., the statement of the wage theory in Prof. Marshall's "Economics of Industry," p. 131.

† "Theory of Pol. Econ.," Jevons, p. 50.

‡ Compare, for opposite conclusion, Prof. Marshall's "Economics of Industry," p. 134.

3. CLASSIFICATION OF PROPOSALS THAT HAVE BEEN ADVANCED TO SECURE THIS APPROXIMATION OF ECONOMIC AND ACTUAL WAGES, OR TO EFFECT ALTERATION IN THE EXISTING SYSTEM OF THE DISTRIBUTION OF THE PRODUCT.

The table and diagram are intended to exhibit the characteristic features of the three main groups of schemes of social progress, and their relations to the existing system of distribution of the product, and to each other.

A.—INDIVIDUALISTIC GROUP—

- (a) Peasant proprietary.
- (b) Peoples' banks.

B.—ASSOCIATIVE GROUP—

- (c) Trade unions.
- (d) Consumers' leagues.
- (e) Sliding scales.
- (f) Profit sharing.
- (g) Co-operation for production (federalistic) combined with profit sharing.
- (h) Co-operation for production (individualistic) combined with profit sharing.
- (i) Co-operation for production and distribution combined with profit sharing.

C.—SOCIALISTIC GROUP—

- (j) Collectivism (Marx).
- (k) Communism (Fourier).
- (l) Anarchist-Socialism (Kropotkin).

DIAGRAM showing effect of the adoption of Schemes of Social Progress.

Classes presently exercising Function.	Function.	Reward.	
State.	Government.	Taxation.	
Landholders.	Landholding.	Rent.	
Capitalists.	Holding of Capital.	Interest.	
Employers.	Organization of Labour.	Salaries and Profits.	
Labourers.	Labour.	Wages.	

LAND NATIONALIZATION involves the transference of the function and the reward of landholding from the landholders to the State, and does not necessarily involve anything else.

STATE SOCIALISM involves the transference of the functions of landholding, capital-holding, and in extreme forms also the organization of labour, from those who exercise these functions at present to the State—the officials of the State exercising the functions and being paid for their service.

PEASANT PROPRIETARY involves the transference of the function of landholding to the labourer.

CO-OPERATIVE PRODUCTION WITH PROFIT-SHARING involves the transference of the function of the employer to the labourers collectively, and in extreme forms also the function of the capitalist.

CO-OPERATIVE DISTRIBUTION AND CO-OPERATIVE PRODUCTION (FEDERALISTIC) involve no transference of function from one class to another.

(a) The system of *peasant proprietary*, when carried out within rigid limits, excludes the necessity of distribution of the product, since the peasant is at once labourer, employer, capitalist, and landlord. The question of wages, unless he be an employer of others does not emerge. His economic wages and his actual wages are identical.

(b) The method of *peoples' banks* advocated with much success by Schulze-Delitzsch, is devised for the purpose of enabling small capitalists to employ their capitals independently in trade, and is analogous to the system of peasant proprietary.

(c) The objects of *trades' unions* may be briefly defined as consisting in the control of wages, and in providing for sick and unemployed.

(d) *Consumers' Leagues*.—It is rather difficult to ascertain precisely the means by which such a body as has recently been formed in England, desires to attain its professed object; but that object appears to be education of public opinion up to the point of reversing the current tendency towards excessive cheapness, and, by so doing, benefiting the labourers. The aim of the league is to induce the consumer to offer a fair equivalent for what he brings, rather than to seek "to establish the maximum inequality in his own favour." It does not appear how this could be done, if it were done, without simply raising profits. The only prospect of effecting any change in wages would be in those trades where trade unions are strong. Even there, however, it might conceivably result in an advance of prices in those commodities consumed by the producing classes generally, and so effect more harm than good. The establishment of such a league might, however, if it were strong enough, emphasize the recognition of the fact that it is ineconomical to pursue excessive cheapness to the bitter end.

(e) *Sliding scales*. These have been dealt with exhaustively in Mr. Price's "Industrial Peace," and in Professor Munro's papers and reports. It need only be mentioned that their adoption involves no necessary approximation of actual wages to economic wages, but that it does involve comparative immunity from the disastrous arbitrament of strikes. The proposal to establish sliding scales by Act of Parliament is open to the objections which attach to all Parliamentary attempts to fix wages.

(f) *Profit Sharing*.—The fundamental idea in profit sharing is so to modify the wages system, that in addition to actual wages there should be paid to the labourers a proportion of the profit which would otherwise go to the employer. The classical example of profit sharing is the *Maison Leclaire*.

The idea has been adopted to a small extent in this country with varying success. The only satisfactory basis upon which profit sharing would appear to be capable of successful management would be a basis of perfect publicity and mutual intelligence and confidence. These conditions are supremely hard to secure.

(g) *Co-operation for Production (Federalistic) combined with Profit Sharing*.—This is the chief of the rather complicated series of methods of co-operative production. A number of co-operative societies for retail distribution enter into a joint stock co-partnership for the purpose of manufacturing as well as selling. So far there is no practical difference between the enterprise and an ordinary joint stock concern. The dividend to the purchasing society or individual is simply a discount. Some such societies, however, permit the workers in their works to share the profit. The extent to which they do this is sometimes extremely trifling, but the existence of it is evidence of some desire to reward labour according to its product, and not according to the market price of labour force.

(h) *Co-operative Production (Individualistic) with Profit Sharing*.—This method involves, as has been said, the hiring of capital by the workers instead of the reverse, and in spite of many difficulties and drawbacks in the details of the methods proposed, there is an evident tendency in England to give the system a trial. A large number of Societies, founded on this principle, has been established during the past few years. One danger is that the idea might prematurely lay hold of the public imagination and lead to the starting of a number of Societies, whose membership and prospects from the beginning forbid success. Creeping along gradually, as it is doing just now, there is a probability of its ultimately becoming an important factor in the determination of local wages.

(i) *Co-operation for Production and Distribution combined with Profit Sharing*.—An industrial experiment which has been going on since 1860, which has been, within its own limits, extremely successful, and which, as yet, has been followed by no exact imitation, is the *Familistère* at Guise. M. Godin, the founder, set himself to solve this problem of the distribution of the product. He conceived at last that he had determined the economic share due to each contributory in his productive group, and with a sublime courage he set himself to realize his ideal workshop and home. His instructive, though rather passionate work, "*Solutions Sociales*"* is full of valuable suggestion and encouragement. The progress of the *Familistère* during the next twenty years will test the possibility of a great endowed Institution for production being carried on successfully after the founder and his immediate successors have passed away. A colony on the model of the *Familistère* was founded in 1886 amid many preliminary difficulties and discouragements at Sinaloa, inland from Topolobampo Bay, Mexico. The experiment is an interesting one, though it would not be surprising if

* Paris: Guillaumin, 1871.

the difficulties of establishment in a remote region, in addition to the difficulties of effecting a great change in economic and industrial habits, were to prove too much for the enthusiasts for "integral co-operation."

Neither the *INDIVIDUALISTIC* Group nor the *ASSOCIATIVE* Group, whose leading members have been thus briefly described, contest the legitimacy of the private exercise of the functions of land-holding, capital-holding, and employing. It is the distinguishing peculiarity of the third group that it does so. Not only does the *SOCIALISTIC* Group demand that the equivalent of the share of labour in production should be paid to labour, but it demands that private control of the means of production should cease.

(j) The *Collectivist* would take the instruments of production from the hands of the present holders and place them in the hands of the government in trust for the people, the organisation of labour being effected by the government.

(k) The *Communist* would decentralise the government and the organisation of industry alike—the people being divided into communities whose industry would be more or less self-sufficing—the entire available means of each group being available for the subsistence and communal action of the group, while each individual member would be expected to contribute in labour according to his capacity.*

(l) The *Anarchist-Communist* is only distinguishable from the *Communist*, as defined, by his opposition to authority in all forms. The *Communist* would not have an industrial master, but he might have an industrial chief. The *Anarchist-Communist* would recognize worth without rewarding it otherwise than by respect, but he would recognize no authority. The difference is partly political, since to the *Collectivist's* and *Communist's* dictum, "No exploitation of man by man," the *Anarchist-Communist* adds, "No government of man by man."

While these schemes may seem very foreign to our present industrial life, yet the ideas which they represent in extreme forms are germinating among us, and the social forces whose movements we have to estimate are moulded on some one of these lines. Either they are making for increasing the power of the State over industry, like the Socialists; or they are making for the diminution of it, like the Anarchists. They are making towards the fraternal co-operation of those who hold the means of production with those who exercise those means, or they are making for the transformation of society by the suppression of existing classes.

From the strictly economical point of view, the question narrows itself down to this. Which method of distribution is the most economical? And in order that we may be able to answer that question, we must know what is the precise character of current distribution. It is necessary, in fact, that the same elaborate care which has been devoted to the study of prices should now be directed to the study of wages.

* Only one communist industrial society exists in England, that of Furniss & Co., Moorhay Farm, near Sheffield. The society carries on the business of quarriers, farmers, and market gardeners.

APPENDIX I.

CASE OF EXPLOITATION OF MINERALS.

ESTIMATE FOR ONE WEEK'S EXPENSES AND PROFITS IN BRANCH No. 1.

Wages for one Week--12 Men, averaging 25s. each, ...	£15 0 0	Product, less Cost of Raw Material, ...	... ..	£150 12 0
Engine Stores, &c.—Coal for Engine, ...	3 0 0	Deduct say one-third for Loss of Time, Changing Work,	... ..	...
Waste, Oil, Tallow, Sand, Preparing and Repairing Tools, ...	3 5 0	Repairs, &c., ...	... ..	50 4 0
Weekly Profits, ...	21 5 0			
	79 3 0			
	£100 8 0			£100 8 0

ESTIMATE FOR ONE WEEK'S EXPENSES AND PROFITS IN BRANCH No. 2.

To Cost of Piece-work, as per Contract with Ganger, 600 Tons at 5s., ...	£150 0 0	By Sale of Product per Week, 600 Tons at 11s. 6d., ...	... ..	£345 0 0
Royalty, 600 tons at 3d., ...	7 10 0	Deduct for unforeseen contingencies, per Week, ...	... ..	30 0 0
Manager's and Secretary's Salaries, Directors' Fees, and General Office Expenses at Works per Week, ...	30 0 0			
Weekly Profits, ...	127 10 0			
	£315 0 0			£315 0 0
Showing over 20 per cent. on £50,000, the Capital of the Company.		Branch No. 1, per Week, £79 3s. x 52 = ...	... ..	£4,115 16 0
		Branch No. 2, per Week, £127 10s. x 52 = ...	... ..	£6,630 0 0
				£10,745 16 0

APPENDIX II.

While it is unsafe to found wide generalizations upon narrow data, many useful suggestions may be derived from study of such family budgets as those given in the two following examples. Were statistics of the same minute character collected in quantity and over a wide area by a public office or by competent and sustained private inquiry, much light would be thrown upon practical problems that press for solution. The cases given are those of Lanarkshire miners, one earning, under normal circumstances, the average wage as stated in the statistics of the iron trade, and the other earning a wage, in normal circumstances, considerably below that average. In some respects the year 1886 is not quite a representative year, for during the latter half of it the output of coal from the Lanarkshire mines was restricted by combined action on the part of the men, the avowed object being to reduce the amount of stock in the hands of the mine owners, and so render them less independent of the daily output. In proportion to the quantity of coal at the pit head the employer is in a position to maintain his ground during a strike, and the policy of the miners was therefore directed towards a reduction of this power of resistance on the part of the masters. During the half-year in which the "restricted darg" was in operation the men voluntarily submitted to the reduction of their wages approximately by one half, with this ulterior object in view. The latter half of 1886 was therefore an exceptional time, and in examining the statistics this must be borne in mind.

In CASE No. 1.—C. D. was an "oncost" man, whose wages did not suffer by the restriction of the darg. His budget for 1886 may therefore be regarded as fairly typical of the budget of a miner of his class. In CASE No. 2, the wages of A. B. were subject to diminution during the latter half of the year through the operation of the "restricted darg." As regards the *income* in both cases, it will be observed that irregularity of employment from strikes or other causes effected a serious diminution, and also that the number of deductions from the gross amount of the wages is open to criticism. So far as the *expenditure* is concerned, the classification adopted is that of Engel. The Massachusetts Bureau table is taken from the Report of the Bureau for 1885. It may be remarked generally that the fare on which these miners and others of the same classes, of which statistics have been collected, subsisted in 1886 was not, either in point of variety or quantity, equal to the scientific dietary provided for convicts undergoing hard labour. It must be noted, however, that the miner's dietary as thus disclosed is not, even within the limits of its monetary amount, a dietary of a scientific character. These examples are given merely by way of stimulating inquiry along the lines indicated.

APPENDIX II.—No. 1—EXAMPLE OF SCHEDULE FOR MINING STATISTICS.

1. Name, C. D.
Married.
2. Children's ages, 1 and 2 years.
WORK—(1)

Age, 28.
LIVING—DETAILS OF EXPENSES.
Per Annum.

Rate of Wages in 1886.	Net Wages after deductions below.	1. SUBSISTENCE—	Tasted butcher meat only 3 times a-year.	2. CLOTHING—Boots, Clothes,	Total,	3. RENT.	4. FUEL—Coal, Oil, Gas,	5. EDUCATION—School Fees, Church,	6. LEGAL PROTECTION—Taxes, Doctor's Bill,	7. CARE OF HEALTH—Medicines,	8. COMFORT—Tobacco, Sundries,	Per Annum.
Wages per Shift.	Per Week.	35 lbs.	—	£	9/10½	£	£0 7 6	NIL	0 2 2	1 1 8	3 5 0	£
2/8	15/-	—	—	—	—	—	—	—	—	—	—	—
1/8	15/-	—	—	—	—	—	—	—	—	—	—	—
3/	9/-	—	—	—	—	—	—	—	—	—	—	—
...	17/-	—	—	—	—	—	—	—	—	—	—	—
3/	17/-	—	—	—	—	—	—	—	—	—	—	—
3/	14/-	—	—	—	—	—	—	—	—	—	—	—
3/	14/-	—	—	—	—	—	—	—	—	—	—	—
3/6	16/6	—	—	—	—	—	—	—	—	—	—	—
3/6	16/6	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—	—	—
...	15/-	—	—	—	—	—	—	—	—	—</		

APPENDIX II.—No. 2—EXAMPLE OF SCHEDULE FOR MINING STATISTICS.

(5) Total Wages earned,	£33	2	4
Sick Allowance,	1	4	0
	<hr/>		
Debt incurred,	£34	6	4
	4	5	0
	<hr/>		

Sundries,	£0 1 3	per week.
---------------------	--------	-----------

APPENDIX II.—No. 2.—EXAMPLE OF SCHEDULE FOR MINING STATISTICS.

1. Name, A.B. Married.		Age, 45.		LIVING—DETAILS OF EXPENSES.		Per annum.		Weekly.	
2. Children's ages, 4, 7, and 11 years.		3. Children's earnings, none.		1. SUBSISTENCE—		2. CLOTHING—		3. RENT.	
4. Net Weekly Average, 17/2.		5. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Bread, 2 1/11		Clothes, Man, 1 Suit, 50/, Family, 60/;		8 11 6	
5. Net Weekly Average, 17/2.		6. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Flour, 4 1/2		Wife, 7/6;		3 10 0	
6. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		7. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Mcal. 7 1/6		Linen, &c., 30/.		3 13 8	
7. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		8. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Potatoes, 1 1/2		Clothes, 2 cwts. per week at 1/, £2 12 0		3 13 0	
8. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		9. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Butter, 1 1/2		Oil and Gas, 5d. per week, 1 1 8		0 13 0	
9. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		10. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Jam, 8/ per season, —		Education—School Fees (deducted from wages), —		0 7 6	
10. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		11. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Bacon, —		Church, —		0 12 0	
11. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		12. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Meat (once a week during latter half of year), 3 1/4		LEGAL PROTECTION—Taxes, —		0 6 6	
12. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		13. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Eggs, —		CARE OF HEALTH—Doctor's Bill, —		—	
13. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		14. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Fish, —		COMFORT—Mental and Bodily Recreation, —		—	
14. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		15. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Cheese, —		Tobacco, 2 ozs. per week, 0 7		—	
15. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		16. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Milk (Sour), 3 pts.		Books—Sub. Library, 0 0 3		—	
16. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		17. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Beer, 1 lb.		Newspapers, 0 0 7		—	
17. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		18. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Tea, —		Public Entertainments, NIL		—	
18. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		19. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Sugar, 3		Total Expenditure, £66		5 6 1	
19. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		20. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Soap, —		Total Expenditure, £66		5 6 1	
20. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		21. Deficit, £19 19s. 6d., partly debt and partly saved by consumption being less than normal.		Sundries, —		Total Expenditure, £66		5 6 1	

SUMMARY.

MINERS' WEEKLY EXPENSES.										ENGEL'S LAW.			MASSACHUSETTS BUREAU TABLE.						
A B. Miner, with Average Wage.										C D. Miner, with Wage below Average.			Per Cent. Expenditure in Family Earning.			£60 to £90 a Year.		Per Cent.	
Amount.		Per Cent.		Amount.		Per Cent.		£45 to £60 a Year.		£60 to £120 a Year.		£120 to £220 a Year.							
s. d.				s. d.															
16 10½		67.1		9 10½		66.5		62		55		50		64					
3 3		12.9		0 6		3.4		16		18		18		17					
1 4		5.3		1 3		8.4		12		12		12		20					
1 5		5.7		1 6		10.2		5		5		5		6					
0 5		1.7		...		...		2		3.5		5.5		3		
0 3		0.9		0 0½		0.3		1		2.0		3.0							
0 2		0.7		0 5		2.8		1		2.0		3.0							
1 5		5.7		1 3		8.4		1		1.5		3.5							
25 1½		100		14 10		100		100		100		100		100					
1. Subsistence, ...																			
2. Clothing, ...																			
3. Rent, ...																			
4. Fuel, ...																			
5. Education, ...																			
6. Taxes,...																			
7. Care of Health, ...																			
8. Comfort and Recreation, ...																			

